

**DROUGHT IN THE  
ANTHROPOCENE  
NETWORK**

# Drought in the Anthropocene

A 2nd decade for the socio-hydrology/hydro-sociology network  
focusing on the intertwined nature of humans and drought propagation

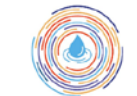
**IAHS**

10 years Drought in the Anthropocene network  
- Strategy document

Drought management is challenging because feedbacks between drought and people are not fully understood.

In this human-influenced era, we need to rethink the concept of drought to include the role of people in mitigating and exacerbating drought.

- Quantify influence of water use and management on drought propagation
- Investigate spatial and temporal trade-offs in drought (mal)adaptation
- Model the interactions between drought and people using interdisciplinary perspectives



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# About Us

Drought in the Anthropocene studies human-water interactions through a drought risk - adaptation lens.

# Research focus of the Drought in the Anthropocene network

From Panta Rhei to HELPING: continuation and broadening focus

## Science-for-scientific-development

- How are people enhancing/alleviating drought hazards? How are people impacted by drought events?
- How are people responding to drought by changing water use, land use, water management, and water storage? How do individual vulnerability and coping capacity translate into heterogeneous drought risk within societies and across sectors?
- How do human activities exacerbate or alleviate the societal impacts of droughts? How does this adaptive response feedback result in aggravated (or alleviated) drought conditions and impacts?

## Science-for-policy-support

- How can the interaction between people and the water system be included in drought **monitoring**? How can drought impacts rather than hazards be **forecast**?
- How does risk perception influence drought **adaptive behaviour** and how can this be used to support DRM? How can the dynamics of vulnerability be included in **vulnerability and risk assessments**?
- What recommendations on **drought risk reduction** mitigation, preparedness, and response can be made while being sensitive to human-water feedbacks, the propagation of drought (impacts), and drought-flood interactions?

# Activities of the Drought in the Anthropocene network

Google mailing list to keep each other updated on interesting papers, initiatives, activities.

## Workshops, meetings, webinars

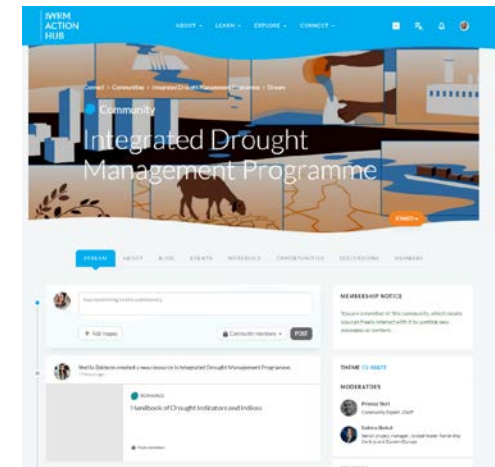
- Invite researchers, practitioners, networks during monthly online webinars to connect, update
- Yearly 2day workshop linked to other relevant event (last year: PR closing event)
- Meetups at EGU, AGU, IAHS,... conferences

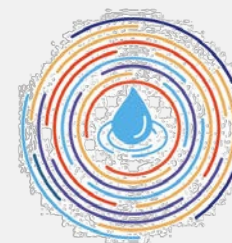
## Collaborative papers, Journal issues

- Special issues on drought
- Ongoing and published collaborations:
  - Van Loon et al. Using paired catchments to quantify the human influence on hydrological droughts, *Hydrology, Earth System Sciences*, 23, 1725–1739 (2019) [10.5194/hess-23-1725-2019](https://doi.org/10.5194/hess-23-1725-2019)
  - Rangelcroft et al. An observation-based method to quantify the human influence on hydrological drought: upstream–downstream comparison, *Hydrological Sciences Journal*, 64:3, 276–287 (2019) <http://doi.org/10.1080/02626667.2019.1581365>
  - Margariti et al. Anthropogenic activities alter drought termination, *Elementa: Science of the Anthropocene*, 7:1, 1–27 (2019) <http://doi.org/10.1525/elementa.365>
  - Sutanto et al. Moving from drought hazard to impact forecasts. *Nature communications*, 10, 4945, 1–7 (2019) <http://doi.org/10.1038/s41467-019-12840-z10>
  - Sutanto & Van Lanen, Hydrological Drought Characteristics Based on Groundwater and Runoff Across Europe. *Proceedings of IAHS*, 383, 281–290 (2020) <http://doi.org/10.5194/piahs-383-281-2020>
  - Wendt et al. Asymmetric impact of groundwater use on groundwater droughts, *Hydrology Earth System Sciences*, 24, 4853–4868 (2020) <https://doi.org/10.5194/hess-24-4853-2020>
  - Ward et al. The need to integrate flood and drought disaster risk reduction strategies, *Water Security*, 11, 100070 (2020) <https://doi.org/10.1016/j.wasec.2020.100070>
  - Wendt et al. Managed aquifer recharge as a drought mitigation strategy in heavily-stressed aquifers, *Environmental Research Letters*, 16, 1, 014046 (2021)

## Connections with other initiatives

- IDMP
- EGU
- Risk-Kan
- Friend Low flow





DROUGHT IN THE  
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## BOARD

*Secretaries*

*External relations management*

*Internal activities management*

*Media management*

*Fund management*

*Workshop management*

*Advisory board members*

*Regional coordination reps*

# Welcome!

Marthe Wens



Secretary of the board



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DitA on twitter, instagram



IAHS